WHIRRAKEE

January/February 2001 Vol. 22 No. 1

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MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.

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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $34; Family $40; Concession: Single $28.50; Family $34. *Whirrakee* subscription only is $34. These rates include GST.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. Meetings start at 7:30pm and conclude with supper. The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 7:30pm. Members of the Committee are the Office Bearers listed above, together with the following members: Darren Green; Maurie Lewis; Kate Lottkowitz; Phil Robertson; Bob Ruddick

Excursions The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. Full-day excursions normally commence at 10am (usually on a Sunday); half-day excursions normally commence at 2pm and may be either on a Saturday or Sunday. Full-day or half-day excursions are usually held on the weekend following the General Meeting. Campouts are held several times each year, usually coinciding with long weekends or holiday periods.

The Bendigo Field Naturalists Club has 2 active sub-groups:

Bird Observers Group: meets on the first Friday of the month, at 7:30pm. The venue for meetings is the Golden Square Senior Citizens Building.

President: Anne Bridley
Secretary: Jane Cleary

Mammal Study Group: meets on the fourth Wednesday of the month at 7:30pm in the Golden Square Senior Citizens Building.

Chairman: John Burtonclay, Fadersons Lane, Mandurang (5439 5710)
Secretary: Bill Holsworth, 13 Nabilla Crs., Bendigo (5443 4063)
Equipment Officer: Maurie Lewis (0407 427179)

Front Cover: Photographer: Ian Flecknoe-Brown
In summer it is often a little harder to spot any activity in the bush but insects are always around. Here is an ant attending to (probably the nymphs of) some sap-sucking bugs. These bugs insert their stylet into the tubes that carry the sugary sap from the leaves to elsewhere in the plant. This sap is under pressure in the plant, so all the bug has to do it stick in its straw and enjoy! However, the sap is also quite poor in essential minerals so they need a lot of it. The excess sugary solution is excreted through the rear end and becomes ant food. Ants therefore attend to these bugs, sometimes guarding and defending them to ensure a continuous supply of sugar. They don't care where it comes from....

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club
Vol. 22, No. 1, January/February 2001
Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*) which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles.
Contributions will be included as soon as possible after they are received, although articles received more than one week after the monthly General Meeting will probably be too late for inclusion in the next issue of *Whirrakee*.
Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editors' Note
We were very sad to hear that John Guley died on January 14. Many members of the Club attended the funeral and the reception afterwards at the Club rooms. There are hard times still to come so we extend our thoughts and hearts to Anne and the families for the healing process.

Bill Holsworth has been extra busy in the last few weeks, putting together another exciting and promising syllabus for this year's speakers and providing the majority of the material for this issue. Now we are keen to hear from all the rest of the membership.....any contributions are welcome!

NEW MEETING FORMAT STARTING MARCH

You may come at 7:00 pm if you wish to take part in SPECIAL WORKSHOPS on learning how to become a competent naturalist. Or you may come between 7:00 and 8:00 pm to visit with friends, read recent publications, and help set up the hall for the evening speaker.

The speaker starts at 8:00 pm. After the speaker there will be time for special announcements, reports and other business. The meeting concludes with a "bring a plate" supper.

Weekend indoor and outdoor activities and excursions are scheduled on an irregular basis.

News from the Bendigo Field Naturalists Garden

Author: Barbara Chmielewska

This year is very hot, as all of us have noticed. We have lost a lot of well established plants because we had few days of heavy rains that were followed by scorching hot weather which burnt the new growth.
The same happened in the bush.

Good news is that the Fire Brigade is not expanding on to the garden area and we can complete stage 4.
A lot of work will have to be done especially because the exotic trees which are growing next to the fence are sending suckers and they will be hard to get rid off, unless the trees are poisoned.

We have also received funding for twice as many plants this year as in the past, so we will be busy. We do not have to plant all of the plants this year. It will be very important to make sure that the weeds are properly killed before planting. We plan to replace the dead plants in the established garden and plant larger trees and shrubs in area 4. We will require papers for mulching, so please save your papers for the garden. This year like last year we will have a bobcat for spreading the mulch, so the work will be not as hard.

The Garden Committee has met and decided on the plants which will be ordered from the Goldfield Revegetation Nursery.

Just like in the past, we will be advertising our working bees in the *Whirrakee* and during the meetings. Hopefully we will continue to get many hands to make the work lighter and more enjoyable.

Bird Observation in November

Author: Alf Howe

White Hills, Dundas Rd opp. Bowls Green
White-winged Triller 4/10, 13/11

Carnies Reserve, Prairie West, 25/11
Australian Raven
White-necked Heron
Striated Pardalote
Wedgetail Eagle (2)
Straw-necked Ibis (14)
Willie Wagtail
Brown Treecreeper
Magpie Lark
Black Duck
Magpie
Red-rumped Parrot
White-winged Chough
White-plumed Honeyeater
Dusky Woodswallow
Long-billed Corella
Galah
Dollar Bird
Kookaburra
Restless Flycatcher
Grey Teal
Noisy Miner
Eastern Rosella
Crested Pigeon
Ruhas Pipit
Yellow-rumped Thornbill
Little Hobby
Pied Butcher Bird (5), 2adults, 3 fully fledged young

The Green Plan

Author: Bill Holsworth

The City of Greater Bendigo released last year a Draft Natural Environment Strategy Plan for public comment. The Committee of the Bendigo Field Naturalists Club responded to the plan in January. If you wish to have a copy of our detailed response please contact the Secretary, Bill Holsworth.
Many of the comments we made related to specific items in the plan but some comments have a general or philosophical basis. A few of these are repeated below.

The objective most likely to be of concern to our members is: **Item 3.2** Strategic Directions for Management, **Objective 6**: "Ensure that regional development activities ... are consistent with environmental sustainability". By their very nature some "development" activities and agricultural practices cannot be consistent with environmental sustainability. On these matters we will consider that long-term public values have precedence over short-term private interests. Although many persons in the City will consider that economic development is the most important consideration, we will press the logic that economic development only makes sense if it can occur in a good social and natural environment. This logical sequence is now commonly referred to as the "Triple Bottom Line".

Action item 1.5 notes the environmental expertise available to it from some government agencies. To this list should be added the University, TAFE, and several community groups. The forum planned for June 2001 could benefit from this wider selection of participants.

Action item 1.15 refers to support for the "Adopt a Road Program". This is an activity that the Bendigo Field Naturalists Club Inc. supports, and we already participate in the "Adopt a Highway Program". We would like to have adequate garbage bins at pull-off spots on the roads and have these bins emptied frequently. We note that the Council is allocating resources for rubbish disposal and we hope that means that rubbish collected by volunteer groups will be collected by the Council.

Action item 1.16 refers to unmade government roads. This item is given a low priority but we think it should be dealt with immediately. Several times in the past few years we have had to argue the case at planning tribunals for preserving the environmental values of these unmade roads. This should be considered with Action item 1.21.

Action items 1.34, 1.35, 1.36 and 1.39 relate to public information and education. The Bendigo Field Naturalists Club Inc. has taken a keen interest in this area for many years. Our members have considerable expertise in this area and would be willing to contribute to these projects.

The Objectives and Strategies summarized on pages 43 to 45 are positive approaches to producing a sustainable environment. The objectives and strategies relating to agriculture, forestry and Mineral resource exploitation have the potential to be strongly negative factors in determining the quality of life in the City of Greater Bendigo. We urge the Council to consider very carefully the balance between private and public benefits, and short-term and long-term consequences of project proposals relating to these industries.

Street Planting - Foreign Trees vs Native Trees

From The Bulletin, October 24, 2000, in their regular column *100 Years Ago October 20, 1900.*

'COUNCIL SEES RED
When Melb. City Council was talking of painting Melbourne red and planting foreign trees all over the place in honour of the visit of the Duke of York, one timid councillor ran the risk of being cursed black as a pro-Boer by hinting in an apologetic way that a few Australian trees might be planted too. Whereupon a ponderous alderman named Maloney squelched him with the declaration that "there is no beauty in Australian trees compared with the trees of other lands." This is the true Imperialistic and "patriotic" attitude. The council greeted it with approving grunts, and no Australian trees are to be planted.'

Box-Ironbark Forest Alliance

Author: Bill Holsworth

Environment Conservation Council - Final Report on the Box-Ironbark Study Area was not submitted to the Government in December as previously advertised. The current promise is that it will be submitted in June (which year?). Remember the first submissions were made in 1998. Why the delay? Perhaps you should ask your favourite politicians. Keep the pressure on them to very carefully consider the importance of the environment and tell them to forget about the political consequences of upsetting the few dozen miners and sawmill operators. Most people now believe that the environment is more important than environment-destroying jobs. There are thousands of people that now believe that **Green is Good**. Write letters to all the newspapers. Get on the TV and Radio and tell everybody how important a **Clean and Green** environment is to the well-being of the people of Victoria. We understand that our survival in this world depends on the survival of the plants, animals, fungi, bacteria, etc. You must tell this to your friends and get them to repeat it to their friends. Create a ground-swell of public opinion and let the politicians know about it.

The Box-Ironbark Forest Alliance is an informal association of community groups that are interested in protecting the forests in the best possible way. Members of these groups come from communities from Ararat to Wangaratta. They met in Bendigo on 21 January to discuss strategies for keeping the topic in front of the public during 2001. They will be meeting again in Bendigo on 4 March 2001 (12 to 4:00pm) in the Bendigo Field Naturalists Club rooms. If you wish to join in, consider yourself invited.

Editors' Note: In this context we have included another submission, this time from the department of Outdoor Education and Nature Tourism, LaTrobe University, Bendigo (see page 11)

Mammal Study Group

Author: Bill Holsworth

The Mammal Study Group will meet as usual on 4th Wednesday each month in the year 2001. The February 28 meeting will plan the program of lectures, field trips, working bees, and research for the year. All members of the Bendigo Field Naturalists Club are welcome to attend the activities of the Group.

The first activity for the year is, "**Possums After Dark**", part of the City of Greater Bendigo's program, "**Summer in the Park**". Two Saturday evenings have been allocated for this activity. The first was on 3 February (too late for readers of the Whirrakee) but the second evening is on Saturday 10 February at Rosalind Park from 9 to 10 pm. (See separate article on the Summer in the Park program.)

The March meeting of the Mammal Study Group will be held at the picnic pavilion at Lake Weeroona where we will surround the pavilion with mist nets and trap the bats that might be living in the ridge beams. During the past 10 years number of bats trapped has declined. Although we are no longer banding the bats we have continued to catch previously banded bats, some at least six years old.

The Mammal Study Group has received from the North Central Catchment Management Authority and the Natural Heritage Trust (Bushcare) a grant of $1,200 to construct and install habitat boxes in corridor areas near Bendigo. The boxes have been made and are being painted. Help with installing these boxes will be very welcome. Contact Maurie Lewis (phone 040 742 7179) for details.

Summer In The Park 2001

The Bendigo Field Naturalists Club and some associated groups are active in making this program of the City of Greater Bendigo a success. Details of the program are available from the City offices and the Tourist Information office in the Old Post Office. The

following extract lists only those events that a closely related to the activities of the Bendigo Field Naturalists Club.

Wednesday 31 January 2001 - Stargazing Night -presented by Bendigo and District Astronomical Society.

Saturday 3 February 2001 - Possums After Dark - Enjoy an informative chat about possums and view them in their natural habitat. Spectators are request not to feed the possums. 9:00pm till 10:00pm approx.

Saturday 10 February 2001 - Faugh-a-Ballagh Nature Walk - Take a morning stroll and observe the natural wildlife with the Bendigo Deborah Reef Action Group at the Faugh-a-Ballagh reserve. Signage from MacDougall Road, Golden Square will direct you to the nature reserve. 9:00am to 10:30am approx. For more information telephone Maurie Lewis 0407 427 179.

Saturday 10 February 2001 - Possums After Dark - Enjoy an informative chat about possums and view them in their natural habitat. Participants are request not to feed the possums. For more information and location, please telephone Council's Recreation Unit on 5434 6322. 9:00pm till 10:00pm approx. (Editor's note: the Location is Rosalind Park band shell.)

Tuesday 13 February 2001 - White Hills Botanical Gardens Tour - A guided walk through the White Hills Botanical Gardens identifying features of historical interest, trees, art works and architectural infrastructure. Brought to you by the Friends of Bendigo's Botanic Gardens. For more information, please telephone Jane Cleary on 5448 4396. 7:00pm to 8:30pm.

Thursday 15 February 2001 - Rosalind Park Botanical Walk - A guided walk through Bendigo's historic Rosalind Park, identifying features of historical interest, trees, art works and architectural infrastructure. Brought to you by the Friends of Bendigo's Botanic Gardens. For more information, please telephone Jane Cleary on 5448 4396. 7:00pm to 8:30pm.

Landcare Victoria Workshop

The Department of Natural Resources and Environment (Landcare Victoria program) will be holding a full day (10:00am to 4:00pm) workshop at the All Seasons International Hotel 171-183 McIvor Road, Bendigo on 7 March 2001. Their information sheet sent to the Bendigo Field Naturalists Club says: **"The Second Generation Landcare Taskforce needs your help ...** and input to assess the environmental, social and economic impacts of Landcare in Victoria and develop priority areas for maximising the impact of Landcare into the future." ... There is no cost to participate in this workshop and all food and beverages are provided.... A discussion paper [is] available from the NRE Customer Service Centre, call 13 61 86.

You may register as an individual. If you wish to register as part of the Bendigo Field Naturalists Club group please contact Bill Holsworth (Secretary BFNC) by mail, phone, fax (5443 6763) or email (wholsworth@bigpond.com.au).

NATIONAL HERITAGE TRUST

If you have some good ideas that need funds the National Heritage Trust may have money to support the project. Speak to the Committee of the Bendigo Field Naturalists Club, but come with some very concrete plans. Application forms and relevant information can be obtained from the North Central Catchment Management Authority, Huntley, by phoning Mick Davidson on 5440 1803. Forms can also be obtained on www.nht.gov.au. However APPLICATIONS Must BE SUBMITTED BY 23 FEBRUARY 2001.

From the Mailbag
Author: Elaine Mathison

Each month the club receives a number of newsletters and magazines: some by subscription and some in exchange for Whirrakee. These are available from the club library.

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THE BIRD OBSERVER(BOCA)
December 2000

"Birding in the Australian Winter" by Andre Konter describes the experiences of keen European birdwatchers during our last winter. Six widely dispersed areas were visited from Melbourne to far North Queensland, on to Darwin and central Australia.

"Superb Fairy-wrens" by Ellen McKee outlines a two-year survey of these delightful birds in the Royal Botanic Gardens, Melbourne. The survey was undertaken over two years, and results were compared with a study done in 1995.

"Brown Goshawk: Feeding in a Storm" by Anthea Fleming recounts an experience in suburban Melbourne. The Goshawk was observed for almost thirty minutes eating its prey in an open situation despite strong wind and rain.

"Seabird Mortality" by Alan Morris expresses concern about the large number of seabirds found dead or dying recently on beaches in many parts of Australia.

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HABITAT Australia(ACF)
October 2000

- The Greening of Blue Chip Australia: support for the salinity campaign
- The Double-edged Sword: tourism and national parks
- National Advantage: industries, old and new, offer sustainable opportunities for Australia

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THE VICTORIAN NATURALIST(FNCV)
October 2000

- Australian Natural History Medallion: awarded to Dr Malcolm Calder
- Lichens of the Soft Tree-fern in Victorian Rainforests
- Survival in the Suburbs: the (re)discovery of the threatened Swamp Skink
- We Paddle with the Platypus: Lake Elizabeth, near Forrest in Western Victoria

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PARKWATCH(VNPA)
December 2000

"Shrines, Temples and National Parks" outlines the situation in Japan where reverence for nature exists alongside ecological devastation.

"A Trip to Lake Eyre" describes a recent visit following its partial filling. Less birds than expected but much of interest.

"Snakes and Snake Bite": prevention, effects and first aid.

"Pyrete Range - Victory for People Power" outlines the long struggle to add this attractive area near Gisborne to the Lederderg State Park.

"French Island National Park": its early history and evenual protection.

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Also received recently:

*Castlemaine Naturalist(CFNC)
December 2000

*Geelong Naturalist(GFNC)
December 2000

*Newsletter(Ballarat FNC)
December 2000

*Field Nats News(FNCV)
December 2000

*Tuan Talk(Box-Ironbark)
November 2000

*Envirobusiness Update(Environment Australia)
September 2000

*Annual Report Parks Victoria

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News from Don Franklin

Persons who have been members the Club since the mid 1980's will know Don Franklin very well. Others will know him as one of the authors of the Eucalypts of the Bendigo District. The bird watchers will know of his excellent work on the helmeted honey-eater, the regent honey-eater and more recently, his birds studies in northern Australia. The following 3 paragraphs were part of his Christmas letter to Bill Holsworth. The accompanying article was written specially for the Whirrakee. -

"I am indeed four months into a PhD study of "The ecology and sustainable use of the Top End Bamboo Bambusa arnhemica*". Its a fascinating plant, mainly riparian but also in vine thicket stands on rock outcrops. A fairly large species, typically 10-15 m tall but sometimes more than 20 m. It is long-lived, flowering gregariously over large areas (up to 50 km across) then dying. This is happening now. Its very dramatic.*

"I've a scholarship for the PhD plus quite generous access to vehicles, boats etc. I'm also working one day per week, lecturing and other odds-and-ends in the Key Centre for Tropical Wildlife Management at the Northern Territory University.

*"The bamboo project has been a great excuse for boat trips up some of the remoter sections of Top End rivers. Best of all was the Daly, the grandest of the rivers, tidal for 100 km, flowing wide between large vine-thicket-clad banks for at least another 100 km. On these boat trips, one lives with the knowledge that crocodiles longer than the boat are lurking under the murky waters, but at this time of the year we rarely see them. The Daly is still full of evidence of the two massive floods of recent years, with large logs often to be seen stuck 15 m or more up in large paperbark (*Melaleuca*) trees, and many of the bamboo plants regenerating after having all their above-ground parts swept away."*

The Top End Bamboo

Author: Don Franklin
Key Centre for Tropical Wildlife Management
Northern Territory University, Darwin, NT 0909

Even to many Australians living in the tropics, the distinct growth form of clumping bamboo is so unfamiliar that when encountered it is immediately labelled as a non-native species. But mainland Australia has three species of native woody bamboos, two in north Queensland and one in the Top End of the Northern Territory.

Perhaps this unfamiliarity is why some people think the Top End Bamboo (*Bambusa arnhemica*) is a relatively recent introduction to Australia. It is not closely related to either of the Queensland species. One theory goes that it was brought here, either deliberately or accidentally, by the Macassans, who visited the northern shores of Australia from Indonesia each year to fish for trepang, commencing about 800 years ago. I can't find a shred of evidence to support that idea, though I couldn't confidently rule it out, not yet anyway. The jury is still out on the question, waiting for me to gather all the available evidence. That evidence might include which species in Indonesia or South-east Asia, if any, that the Top End Bamboo is related to, and how close is that relationship. It might also include archaeological evidence, for it is clear that the north Australian Aborigines made considerable use of the species, and there was a major trade route centred on it, linking areas where it does and does not occur.

This is but one facet of my current studies. I am just four months into a three or four year study of the ecology and sustainable use of the Top End Bamboo.

Top End Bamboo is a large, clumping bamboo. Typically, it grows ten to 15 m tall, and on favourable sites may exceed 20 m. Individual stalks (culms) are up to about 12 cm diameter. In a large clump there may be 30, or sometimes even 50 or more culms, forming a dense thicket of stems up to 5 m in diameter. Although fairly localized in its distribution within the Top End, it is locally common and even dominant in riparian forests, especially along rivers from the South Alligator in Kakadu, west and south to the Daly. Sometimes it shares these riparian forests with rainforest trees, sometimes with tall paperbarks

such as the Weeping Paperbark *Melaleuca leucadendra*, and sometimes even with the ubiquitous River Red Gum *Eucalyptus camaldulensis*. In a seeming paradox, it sometimes also grows on rocky hillsides and coastal headlands, giving the lie to the suggestion that it needs lots of moisture. (I think I've solved that paradox already.)

Like a number of bamboo species, particularly in India but also in other parts of Asia and also the Americas, the Top End Bamboo has a bizarre reproductive system. It is a long-lived plant - effectively a tree, though taxonomically its simply a giant grass. However, unlike most trees, it flowers only once in its lifetime, and then dies. What makes it dramatic, however, is that many clumps over a large area all flower, and then die, together. This is thought to be controlled, at least in part, by a genetic clock, and clumps that flower together are thought to be related. These flowering patches can be small - a hectare or so, but most commonly they're enormous. A patch that flowered late in 2000 was at least 40 km across!

Documenting these flowering patches has given me a great excuse for boat trips along many of the north-west Top End's major rivers, taking me to remote and beautiful (and crocodile-infested) places I'd have never otherwise have seen. My backyard has become such legendary places as the Mary, the Adelaide, the Finniss and the Daly Rivers. Especially the Daly. Its a grand river, flowing strongly year-round between vine thicket rainforests and paperbark forests, subject to flooding of truly epic proportions twice in the last four years, tidal for 100 km from the coast, six kilometres wide at its mouth. I'm now planning an "expedition" to some of its remoter middle reaches, something that can only be done now, during the Wet season, whilst the river is running high and clear over the many rock bars.

The results of mass-flowering and die-off can be devastating. Clumps along the tidal section of the Adelaide River flowered in 1998 and 1999. For kilometre after kilometre, all that's left of the old clumps are bleached and gaunt stems, many now collapsing or already swept away by floodwaters. It looks like someone has sprayed the forest with Agent Orange.

But it is an entirely natural phenomenon. And under the skeletons of the older generation, a new generation emerges in equally dramatic form. In the patch that flowered only a few months ago, I've just documented seedling densities that start at 30 per square metre, and run up to about 4,000 per square metre. Before they germinated, the ground was an unbroken carpet of seed. In India, carpets of seed up to 15 cm thick have been reported, and when one mass-flowering coincided with a famine, 14 million people are reported to have survived by harvesting the seed.

No one really knows why some bamboos adopt this peculiar form of reproduction. But theories abound, and the proliferation of seed and seedlings provides a clue to the most popular theory, that its all about providing more seeds than seed-eaters can consume - its called predator satiation. Perhaps its because the bamboo seed is a large, nutritious and defenceless grass seed that such an extreme example of this strategy is necessary. Whatever the reason, it works! Hopefully, by the completion of my study we'll be at least a little wiser about the reasons.

Seed isn't the only food bamboo provides. Perhaps you've eaten bamboo shoots. These are the young culms, which emerge from the base of the clump as a crop each year. The culm shoots of the Top End Bamboo have become quite popular in recent years, and many people have been harvesting them, some commercially. The older culms are sometimes also harvested, mainly for didgeridoo production. Concern that the uncontrolled harvest may damage the clumps has led to the imposition of firm controls pending my work, part of which is to find out what level of harvesting can be supported without damaging the stands.

November General Meeting
Australian Snails, Speaker: Brian Smith

Author: Sabine Wilkens

Brian Smith is a snail expert. He completed his doctorate in 1964, the topic: slugs. His last (paid) job was curator at the Queen Victoria Museum in Launceston and he still maintains a connection to Tasmania. Now retired, Brian has joined LaTrobe University, Bendigo as an Honorary Research Associate. Brian is

relatively new to Bendigo and, having been involved with natural history since his school days, he joined BFNC almost immediately upon his arrival. This talk was thus a good way of getting to new our new member (and, judging by the title of the talk, we might find out something about snails as well...)
Brian started with a picture of a koala. This was to demonstrate the unknown realm of snails. Everyone will recognise the koala, but how many people are aware of the wondrous world of snails that inhabit the Red Centre of Australia? Not many. Some have spiky flat shells and some have hairy shells (Brian showed slides of these) and most of us would never see them even we stood right beside them, they are so small and usually hidden.
Brian introduced some terminology which is used in snail taxonomy. The radula (tongue) is very important for identification, it is also very photogenic. It consists of rows of teeth that are secreted by the radular gland inside the buccal cavity. As the teeth are produced (about 2.5 rows of teeth per day), they move forward as if on an assembly line belt. The radula of the common garden snail *Helix*, has 160 rows of teeth, each row consists of two halves with 50-60 teeth in each. The teeth are made of a chitin-like material and they harden as they move forward from where they are produced. The teeth point backwards and their number, shape and arrangement tells a lot about the snails diet.
The upper stalks are the eye stalks. In most snails the eyes are everted but one group of slugs has a telescopic eye stalk. The lower stalks are vibration sensors and are thus equivalent to the ears.

Most people associate snails with wet weather but snails occur in all habitats, wet and dry. Australia has six large areas which differ in their snail fauna. As with the flora, the South-west region has a totally different flora to the rest of the continent. The northern tropical region has the most varied snail fauna. Snails of the desert are able to 'close down' during dry spells. This ability was illustrated well by a number of specimens from the Sahara desert kept for years in the British Museum, which walked off their display area after they were accidentally wetted. A similar incident happened to Brian with snails he had kept for over two years.

Brian then introduced various snail families, their distributions and some of their representatives. *Uneglibta tasmaniensis* is the flagship for the conservation of Tasmania's wet forest. This is an endemic genus for Tasmania. This snail only occurs in a small area of wet forest and it is not known what size habitat the snail needs to survive. Forestry Tasmania applied to have its name withdrawn from the threatened species list. Brian gave evidence in favour of leaving the snail on the list but the case was recently lost.

Australia's largest native snail is the size of a tennis ball and it lives in northern NSW (Dorigo area). Victoria's largest snail lives in the far east of the state, north of Lakes Entrance. Its shell length is about 50-60mm.

Carnivorous snails are characterised by a very large buccal mass. The sabre tooth snail eats other snails, earthworms insect larvae and some carnivorous snails are even quick enough to catch slaters (!). When a carnivorous snail attacks a larger snail, it puts its head inside that of the victim and pulls out its insides.
There are a number of carnivorous snails in Victoria but not many have reached Tasmania. This is interesting as the last connection of Tasmania to the mainland was only 10 000 years ago.

The ordinary garden snail was introduced from Britain/Western Europe. Most introductions were accidental but one into Hobart was deliberate. The snails were brought in to feed the thrushes and blackbirds that had been introduced the year before.
Many snails are pests of agricultural crops and are subject to investigation for biocontrol. However, biocontrol of snail pests by other snails has been tried before and has resulted in the horror story of Hawaii, where one snail was introduced to control another snail pest. Instead of eating the target species, the introduced snail proceeded to eat all the native snails with the devastating result that Hawaii has now lost most native snail species.

The famous edible snail (escargot), a species of *Helix* does not occur in Australia. Brian was once given one lot that was intercepted at Tullamarine Airport. The person had sown them into the lining of his overcoat. He intended to start a snail farm in Australia.

Snail sex is also very interesting. Brian only mentioned this briefly, perhaps he is saving this for another talk.
Even without the sex, it was a fantastic talk.

Editors' Note:
Towards the end of last year we ran a number of copies of submissions by the club and various other groups/people to the Environment Conservation Council (ECC) concerning their Box-Ironbark Investigation. As Bill Holsworth pointed out in his article about the Box-Ironbark Alliance, the matter should be kept up in the public's eyes and ears. It is thus appropriate to print another submission. Here it is:

August 7 2000

Executive Officer,
Environment Conservation Council,
3/240 Victoria Parade,
East Melbourne, Victoria, 3002.

Dear Sir:
We are writing to you in response to the 'Box-Ironbark Forests and Woodlands Investigation: Draft Report for Public Comment'. We and our students are major users of public land in the region covered by your study. In addition we are the teachers of a substantial and potentially influential group of people, future outdoor and tourism guides and educators. We offer our thoughts based on our professional knowledge and experience of the bush and of users and uses of it.

Our Department, Outdoor Education and Nature Tourism, employs 18 staff teaching approximately 220 students in undergraduate and postgraduate studies in the areas of outdoor education, nature tourism and environmental studies and education. We run two Courses: Bachelor of Arts (Outdoor Education) and Bachelor of Arts (Nature Tourism). Both Courses focus on developing knowledge about nature and building relationships to the land, understanding a sense of place.

The Courses aim to develop skills in leading others in natural places, in teaching about nature, exploring and guiding people. Field experience is a vital part of both Courses, involving approximately 3550 student practical days in the Box and Ironbark forests of central Victoria, as well as many more days in other places. Field experience entails environmental interpretation, naturalist studies, bushwalking, navigating, canoeing, rock climbing, and may take students to:

- Rushworth and Whroo Forests,
- Kara Kara Forest,
- Kooyoora, Wehla and Moliagul Forests,
- Whipstick and Kamarooka State Park
- Paddy's Ranges Forest
- Castlemaine State Forest and Castlemaine-Chewton Historic Area
- Parks and reserves in or close to Bendigo, including but not limited to: One Tree Hill, Diamond Hill, Salomon Gully, Mandurang, Sedgwick, Eppalock, Kimbolton and Lyell Forests.

Our graduates generally find employment that involves them in working on public land, and we teach them to understand ecological and land management principles. Unfortunately in this area this is all too easy when it comes to observing degraded land and practices.

In our field work with students we encourage use of local areas wherever possible. We prefer them to get to know a few areas well rather than adopt a consumerist approach to visiting many natural places briefly. We encourage students to value the diversity of the local bush and to enjoy exploring them through a focus on seasonal changes and small scale differences.

We value the local bush because it has a unique blend (in Victoria) of natural and cultural sites and values. In addition, the fragmented nature of the Box Ironbark country lends itself well to understanding of, and occasionally working with, the links between nature conservation on public and private land.

We congratulate the ECC for recommending that conservation reserves be increased. However, we believe the Report fails to adequately address the need to protect Box - Ironbark forests, either for the benefit of the forests themselves or for that of the long-term interests of local communities. In particular we believe the recommendations fall well short of adequate levels for protection, those offered by National Parks.

We would like to make the following points:

- The Report fails to acknowledge that the Box – Ironbark forests have intrinsic value and that management decisions should be made in that light. The last 150 years has seen these forests severely degraded and biodiversity threatened. The future biodiversity of the forests is dependant on **very** substantially increasing the area and level of protection of conservation reserves and the withdrawal of extractive and destructive activities from these reserves.

• The local community is entitled to opportunities afforded residents of other parts of Victoria, to access bush that is assured the highest level of protection. In public meetings, submissions and letters to the media they have indicated overwhelmingly that they want the bush to be better protected than it is. There are no national parks in this area, a situation that is a loss to our students and to others. Your recommendations fail to redress this deficiency.

• The potential of education and nature-based tourism to make a contribution to the communities of central Victoria is unlikely to be realised while extractive activities, such as mining and logging, are allowed to continue. While we understand the need for the ECC to balance the access to the forest by user groups, we believe it is important that balance be sought in low impact, sustainable, activities, not in maintaining activities that have lead to the degradation of the forest.

• Bendigo and Castlemaine in particular offer unique opportunities for sustainable, accessible and diverse tourism activity. In general, experience elsewhere in the State (Grampians, Croajingolong, Alpine and Chiltern National Parks) shows that:
• only when a place is given high conservation status does it attract tourists are as well as local users,
• levels of resources and protection only become available in sufficient quantity to manage and interpret a place adequately for successful tourism when it is a National Park.

• At present both Bendigo and Castlemaine communities are putting considerable effort into developing their respective resources, but in general these efforts tend towards the towns and rural landscapes, rather than towards the bush. We believe this is a function of the inadequate opportunities for people wanting to enjoy certain kinds of experience, those offered by the highest level of protection for nature conservation.

• With specific reference to your Recommendations re Tourism (R38–40), the resourcing and role of community education and interpretation needs a specific recommendation. It is axiomatic that, especially given long-standing anti-conservation attitudes from small sections of the local community, substantial effort will need to go into long term education. In addition, interpretation is the accepted but very under-utilised tool that aids park management so that tourists can enjoy using places without damaging them.

Sincerely,

Deirdre Slattery and Alistair Stewart

On behalf of:
Glyn Thomas
Mary-Faeth Chenery
Peter Martin
Alison Lugg
Lesley Hodgson
Robert Hales
Lisa Marsh
Phil Robertson
Gale Orford
Almut Beringer
Peter Dingle
Ruth Lawrence
Steve McMurtrie
Staff of the Department of Outdoor Education and Nature Tourism, La Trobe University, Bendigo, PO Box 199, Bendigo 3552.

Bendigo Field Naturalists Club Inc.

Speaker Syllabus for General Meetings 2001– Second Wednesday 7:30 pm

Please check each **WHIRRAKEE** for additional events or changes. The speaker will be introduced at 8:00 pm.

Date - 2001	Topic	Speaker
14 February	**Research projects and nature studies** by Club Members	
14 March	**Barking Owls**	**Paul Peake**
11 April	**Urban and Suburban Frogs in the Melbourne Region**	**Dr Kirsten Parris**
9 May	**The World's Most Successful and Smallest Crustaceans**	**John Neil**, LaTrobe University (Bendigo)
5 June	**WORLD ENVIRONMENT DAY - SPECIAL PUBLIC LECTURE**	
13 June	**Implementing a Landscape Approach to Conservation Management in the Goldfields Bioregion**	**Robert Price**, Manager, Flora and Fauna North West Region, DNRE (Bendigo)
11 July	**Pollen Flora of the Box-Ironbark Forest**	**Katherine Legge and Sabine Wilkens**, LaTrobe University (Bendigo)
8 August	**Managing a Saline Environment: the Success of the Loddon-Murray Community's Irrigation Salinity Management Plans**	**Steve Lottkowitz**, DNRE Bendigo
12 September	***Annual General Meeting***	
10 October	**Wildlife Shelters and Wildlife Rescue**	**Garry Cheers, Wildlife Rescue and Information Network Inc.**
14 November	**The Landscape Approach to Biodiversity**	**Geoff Park**, North Central Catchment Management Authority
12 December	**Christmas Dinner** At the Hall, Bring Salad, Casserole or Desert. Come early, to sit down at 6:30, and visit with friends for as long as you like.	

Diary

The General, Bird Observers Group and Mammal Survey Group meetings are held at the Golden Square Senior Citizens Building, Old High Street, Golden Square, unless otherwise indicated.

General Meeting

Wednesday, February 14, 7:30pm
Research projects and nature studies by Club Members.
(please see the article describing the new format for meetings, starting in March, on page 3)

Wednesday, March 14
Barking Owls. Speaker: Paul Peake

Mammal Study Group

The Mammal Study Group will meet as usual on 4th Wednesday each month in the year 2001. The February 28 meeting will plan the program of lectures, field trips, working bees, and research for the year. All members of the Bendigo Field Naturalists Club are welcome to attend the activities of the Group.
Please see article on page 5 about the group.

March 2001 VFNCA Campout

Rawson - Central Gippsland, 9-12 March
see October *Whirrakee* for details and contacts.

Supper

The usual arrangements for supper are as follows: members either bring a plate or pay $1 for supper. This small amount is used to reimburse members who purchase essential supper supplies.

Wildlife Rescue & Information Network Inc.

W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals.
It is fully endorsed by the Dept of Natural Resources and Environment.
Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 35643

Summer in the Park

The Bendigo Field Naturalists Club and some associated groups are active in making this program of the City of Greater Bendigo a success. Details of the program are available from the City offices and the Tourist Information office in the Old Post Office. The following extract lists only those events that a closely related to the activities of the Bendigo Field Naturalists Club.

Saturday 10 February 2001 - Faugh-a-Ballagh Nature Walk - Take a morning stroll and observe the natural wildlife with the Bendigo Deborah Reef Action Group at the Faugh-a-Ballagh reserve. Signage from MacDougall Road, Golden Square will direct you to the nature reserve. 9:00am to 10:30am approx. For more information telephone Maurie Lewis 0407 427 179.

Saturday 10 February 2001 - Possums After Dark - Enjoy an informative chat about possums and view them in their natural habitat. Participants are request not to feed the possums. For more information and location, please telephone Council's Recreation Unit on 5434 6322. 9:00pm till 10:00pm approx. (Editor's note: the Location is Rosalind Park band shell.)

Tuesday 13 February 2001 - White Hills Botanical Gardens Tour - A guided walk through the White Hills Botanical Gardens identifying features of historical interest, trees, art works and architectural infrastructure. Brought to you by the Friends of Bendigo's Botanic Gardens. For more information, please telephone Jane Cleary on 5448 4396. 7:00pm to 8:30pm.

Thursday 15 February 2001 - Rosalind Park Botanical Walk - A guided walk through Bendigo's historic Rosalind Park, identifying features of historical interest, trees, art works and architectural infrastructure. Brought to you by the Friends of Bendigo's Botanic Gardens. For more information, please telephone Jane Cleary on 5448 4396. 7:00pm to 8:30pm.